

Gas Exchange and Transport in Humans

Reference: end of page 261-262

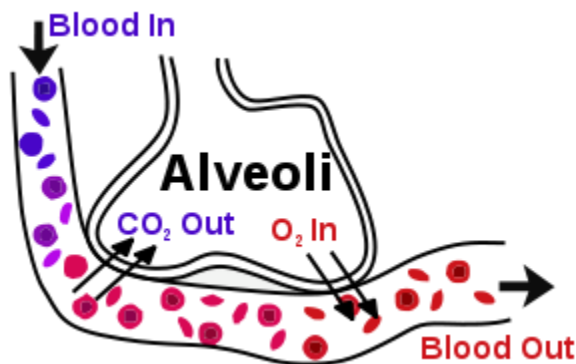
During external respiration, oxygen and carbon dioxide diffuse between the air in the alveoli and the blood in the capillaries that surround the alveoli.

The blood entering the lungs has carried its oxygen to other parts of the body, and now has little oxygen dissolved in it. It has picked up carbon dioxide from body cells and has a high concentration of carbon dioxide. In the alveoli, oxygen diffuses from the air (where the concentration is high) into the blood. Carbon dioxide diffuses from the blood into the air. **Examine figure 8.19 on p. 261.**

In blood, almost all the oxygen is carried attached to molecules of **hemoglobin** in red blood cells.

When the oxygenated blood reaches body cells, internal respiration occurs. Cells have been using oxygen to generate energy, and now have a low concentration of oxygen. They have a high concentration of carbon dioxide.

In blood, most of the carbon dioxide is carried as dissolved bicarbonate ions (HCO_3^{1-}).



<http://images-mediawiki-sites.thefullwiki.org/07/2/1/6/65189354186656401.png>